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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,010	10/15/2008	Lorenz Ratke	4836-000023/US/NP	1598
27572 7590 02/17/2009 HARNESSE, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			EXAMINER WANG, CHUN CHENG	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			02/17/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,010	<b>Applicant(s)</b> RATKE ET AL.	
	<b>Examiner</b> Chun-Cheng Wang	<b>Art Unit</b> 1796	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/07/2006 and 10/15/2008</u> .                               | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. Claims 1-8 are pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Field et al. (US 20040077738).

Field et al. disclose an aerogel-hollow particle binder composition comprising an aqueous binder, hydrophobic aerogel particles, and hollow, non-porous particles (read on claim 1), as well as an insulation composite comprising the aerogel-hollow particle binder composition, and a methods of preparing the aerogel-hollow particle binder composition and insulation composite (Abstract). The insulation composite and aerogel-hollow particle binder composition can also be extruded or molded (read on claim 1) to provide insulation articles such as tiles, panels, or various shaped articles ([0041]). The thermal conductivity of the aerogel-hollow particle binder composition, after drying, will depend, in part, upon the particular formulation used to provide the insulation base layer. Preferably, the insulation base layer is formulated so as to have a thermal conductivity of about 45 mW/(m.K) or less, more preferably about 42 mW/(m.K) or less, or even about 40 mW/(m.K) or less (e.g., about 35 mW/(m.K)) (read on claims 1 and 4), after drying ([0020]). Suitable hydrophobic aerogel particles include organic aerogel particles, such as resorcinol-formaldehyde or melamine-formaldehyde aerogel particles, and inorganic

Art Unit: 1796

aerogel particles, such as metal oxide aerogel particles (e.g., silica, titania, and alumina aerogels) (read on claim 2) ([0007]). Examples of suitable hollow, non-porous particles include Scotchlite™ glass microspheres (read on claims 1 and 3-4) and Zeeospheres™ ceramic microspheres (both manufactured by 3M, Inc.). Field et al. disclose a ratio of hydrophobic aerogel particles to hollow, non-porous particles of about 80:20 to about 20:80 (e.g. 20-80% of hollow sphere, read on claim 5) ([0014]). The hydrophobic aerogel particles desirably comprise opacifying agents, which reduce the thermal conductivity of the hydrophobic aerogel particles (read on claim 6) ([0008]). Field et al. disclose simultaneously applying the binder composition, hydrophobic aerogel particles, and hollow, non-porous particles, to a substrate, whereupon the binder composition is mixed with the aerogel-hollow particle composition to provide the aerogel-hollow particle binder composition ([0034]). The binder composition, hydrophobic aerogel particles, and hollow, non-porous particles are separately delivered to the substrate at the same time, wherein the components are mixed during the delivery process (e.g., mixed in the flow path or on the substrate surface). The insulation composite (e.g., the insulation base layer and/or the protective layer of the insulation composite) or aerogel-hollow particle binder composition can be dried under ambient conditions or with heating, for example, in an oven (read on claims 7 and 8) ([0040]).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Cheng Wang whose telephone number is (571)270-5459. The examiner can normally be reached on Monday to Friday w/alternate Friday off.

Art Unit: 1796

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/  
Primary Examiner, Art Unit 1796

Chun-Cheng Wang  
Examiner, Art Unit 1796

/CCW/